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Wednesday, September 28, 2011

ZeroMQ + libevent in PHP

While waiting for a connection in Frankfurt I had a quick look at what it would take to make ZeroMQ and libevent co-exist in PHP and it was actually quite easy. Well, easy after Mikko Koppanen added a way to get the underlying socket fd from the ZeroMQ PHP extension.

To get this working, install the PHP ZeroMQ extension and the PHP libevent extension.

First, a little event-driven server that listens on loopback port 5555 and waits for 10 messages and then exits.

Server.php

Posted by Rasmus in PHP at 23:10

Hi Rasmus,

Great post! Congrats for it! :D In fact I'm writing an HTTP server based on libevent (for now, is on early development stages) ... but I didn't think to use ZMQ and I just realize that could be interesting to use it ...

If want to check it, it's on github!

<https://github.com/theUniC/Hawk>

Greetings!
Christian.

Anonymous on Sep 29 2011, 00:30

For this kind of development, is there a real benefit to use libevent instead of ZeroMQ's polling feature?

Anonymous on Sep 29 2011, 14:17

If all you are doing is ZeroMQ, perhaps not. But if you are also fielding other types of events then zmq's polling isn't going to help you, and you probably don't want to use both libevent and the built-in polling. In those cases making zmq play nice with libevent becomes quite important.

Anonymous on Sep 29 2011, 14:29

In addition to ZMQ sockets, ZMQ's polling is able to manage any PHP sockets and streams, as well as timeouts. Maybe it's less configurable than libevent, but I never found a real use case where a feature was missing.

Libevent is pretty smart (using epoll, kqueue, ...). I don't know how ZMQ's polling is implemented; perhaps there is some systems on which it's less optimized than libevent, but honestly I never saw any problem with it.

Am I missing something?

Anonymous on Sep 30 2011, 02:06

zmq_poll() doesn't use epoll/kqueue, it is just a regular poll(). zmq does use epoll/kqueue for the internal io threads. However, I am not sure there is much of a performance difference in this case. It might be nice to get some benchmarks on that. Beyond the epoll/kqueue thing, libevent also has a richer featureset and if you already have a libevent-based application it is useful to know that you can slide zmq in there quite easily.

Anonymous on Sep 30 2011, 09:49

Christian,

We've been playing with this concept for a little over a month now. In fact, our lead engineer on this is named Christian too! Pretty funny.

If you want to see some of what we're doing, check out <https://sourceforge.net/projects/eglooframework> on the branch feature/Server.

Early benchmarks are impressive. We've been one of the fastest frameworks for a while now and are starting to get traction - Petflow.com uses us for instance - but once we started implementing our stateful context model we saw performance gains of over

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1800% w/ Smarty and almost a full 2500% w/ embedded template engine extensions.

Check us out. Always interested in feedback.

Best,
George

Anonymous on Sep 30 2011, 10:35